Komisja II – Spawanie łukowe

II-1761r1-11  IIW Subcommission II-E – List of Documents since the 2004 Annual Assembly
II-1762-11  Matrix of ISO filler metal draft standards – Status as of March 2011 - D. Kotecki (USA)
II-1763-11  Round robin of residual element analysis – D.J. Kotecki (USA)
II-1765-11  Exploring the interaction of phase transformation and residual stress during welding by synchrotron diffraction – A. Kromm (Germany)
II-1766-11  Hot extraction of diffusible hydrogen and its measurement using a hydrogen sensor – G.K. Padhy et al (India)
II-1767-11  Diffusible hydrogen content depending on welding and cooling parameters – T. Kannengiesser, T. Lausch (Germany)
II-1768-11  Volume fractions and chemistries of the non-metallic inclusions found in manual metal-arc (MMA) weld metals made on C-Mn steels containing titanium – A.G. Fox (Thailand), G.M. Evans (United Kingdom)
II-1769-11  Metallurgical investigations on electron beam welded duplex stainless steels – D. Keil et al (Germany)
II-1770-11  Effect of nitrogen and boron on the development of acicular ferrite in reheated C-Mn-Ti steel weld metals - M.N. Ilman, R.C. Cochrane, G.M. Evans (United Kingdom)
II-1771-11  Effect of titanium and boron on impact properties in low hydrogen weldments – C.P. Ravichandran (India)
II-1772-11  Evaluation of hot cracking susceptibility of nickel base alloys by the PVR-test – C. Fink, M. Zinke, D. Keil (Germany)
II-1773-11  Addition of cerium oxide in the flux formulations of a basic coated stainless steel electrode - G. Srinivasan, A.K. Bhaduri, S.K. Albert (India)
II-1774-11  Developments in welding consumables for special applications – R. Ravi (India)
II-1775-11  Contribution to the capability of filler metals to influence fatigue of butt joints – M. Stoschka et al (Austria)
II-1776-11  Influence of alloying additions on the morphology of non-metallic inclusions in high-strength steel welds - W. Vanovsek et al (Austria)
II-1789r1-11  Manufacturing and preparation of samples for IIW-round robin on trace elements – G. Posch, H. Pahr, P. Reisinger (Austria)
<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>III-1611-11</td>
<td>An examination of electric servo-guns for the resistance spot welding of complex stack-ups</td>
<td>J. Gould, W. Peterson, J. Cruz</td>
<td>USA</td>
</tr>
<tr>
<td>III-1613-11</td>
<td>Pressure resistance welding in power reactor fuel fabrication</td>
<td>D.S. Setty, G.V.S. Hemantha Rao</td>
<td>India</td>
</tr>
<tr>
<td>III-1614-11</td>
<td>Circumventing practical difficulties in determination of threshold stress intensity for stress corrosion cracking of narrow regions of welded structure</td>
<td>S. Pal</td>
<td>Australia</td>
</tr>
<tr>
<td>III-1625-11</td>
<td>Development of numerical simulation model for FSW employing</td>
<td>G. Yoshikawa et al</td>
<td>Japan</td>
</tr>
<tr>
<td>III-1628-11</td>
<td>The wonderful world of resistance welding</td>
<td>M.J. Greitmann</td>
<td>Germany</td>
</tr>
</tbody>
</table>
The influence of joint edge oxidation and tolerances on the surface shape during laser hybrid welding – A. Kaplan et al (Sweden)

Laser surface transformation hardening on medium carbon steel using high power laser beam – G. Buvanashekaran, S. Manoharan (India)

Investigations on electron beam welding of high thickness AA2219 Aluminum alloy - G. Buvanashekaran, S. Manoharan (India)

Laser welding of borated stainless steel – B. Shanmugarajan et al (India)

Electron beam multipool welding with thermal fields of metal welds based on cast iron - K. Rüthrich, R. Zenker, M. Mangler (Germany)

Single-mode fibre lasers: results of butt welding tests on sheet thicknesses of 3 and 5 mm – J. Neubert, C. Schwalenberg (Germany)

Numerical modelling on laser welding of Ti-6Al-4V with phase transformation effects - M. Tsunori, D. Takakura (Japan)

Applying the solid state Laser-GMA Hybrid process for single-sided full penetration welding of bulb bar profiles in shipbuilding – H. Staufer, C. Kammerhuber, S. Egerland (Austria)

Development of high-efficiency / high-quality fillet welding process using hot-wire laser welding method – M. Yamamoto et al (Japan)


Deep penetration welding with high power laser under low vacuum – S. Katayama et al (Japan) (212-1204-11, XII-1046-11)

High-speed laser cutting of CFRP, and laser direct joining of CFRP to metal – S. Katayama, K.-W. Jung, Y. Kawahito (Japan)

Laser joining of aluminum alloys – state of the art - F. Vollertsen, D. Reitemeyer (Germany)

Laser-arc hybrid welding – recent advances in research and application – C. Thomy, F. Vollersten (Germany) (212-1203-11, XII-2045-11)

Influence of driving forces on weld pool dynamics in GTA and laser welding – S.-W. Han et al (Rep. Of Korea) (212-1192-11, XI-2036)


Research on laser-arc hybrid welding of HT780 steel – T. Suga (Japan) (212-1201-11, XII-2039-11)
Three-dimensional modelling of arc behaviour and gas shield quality in tandem gas–metal arc welding using anti-phase pulse synchronization – M. Schnick et al (Germany), A. B. Murphy (Australia)  

Microstructure and properties of laser deposited and wrought alloy K-500 (UNS N05500) - P.W. Hochanadel, R.D. Field, G.K. Lewis (USA)

Electron beam structurisation of titanium materials for medical applications: potential for improved bone ingrowth behaviour - U. Reisgen et al (Germany)

The development of a new robotic hybrid laser GMAW technology for industry – F. Scandella, P. Gressel (France)
Non-destructive characterization of nickel-base hardface deposit on austenitic stainless steel through eddy current and magnetic Barkhausen techniques – G. Chakraborty et al (India)

Recommendations for the use and validation of NDT simulation – P. Calmon (France)

Advanced NDE techniques for integrity of welded components - T. Jayakumar, C.K. Mukhopadhyay, A. Kumar (India)

Process monitoring and -development system for toe radius – A. Öberg et al (Sweden)

New concepts to improve the quality of NDT evaluation of welding – N. Dhanasekaran, S. Suresh (India)

Establishment of reliable helium leak testing methodology of higher test sensitivity for the important titanium weld joints – T. Gurunathan (India)

Proposal for a specific tool assessing relevance of replacing a NDT method or technique with another one: the OPC approach – D. Chauveau et al (France)

NDT and fracture-mechanics - How can we improve the failure assessment by NDT? - Where we are – where we go? – G. Dobmann , D.D. Cioclov , J.H. Kurz (Germany)

Evaluation of carburized layer depth of cracking tubes in ethylene plant by means of ultrasonic technique – T. Yoshimoto et al (Japan)

Reliability of non-destructive techniques based on a statistical simulation approach - P. Benoist, P. Calmon (France)

State-of-the-art in the MMM method and perspectives of its development – A. Dubov, S. Kolokolnikov (Russia)

X-ray endoscopy for inspection of tube to tube sheet welds in tube sheet welds in heat exchangers - U. Zscherpel et al (Germany)

High energy X-Ray inspection of welds and large components – B. Redmer et al (Germany)
List of standards relevant to Health, Safety and Environment – L. Costa (Italy)

Lung cancer and arc welding of steels

Focus on International and regional standards devoted to health, safety and environment – L. Costa, M. Lundin (Italy)

Exposure to nitrogen oxides (NO/NO₂) in welding – V.E. Spiegel-Ciobanu (Germany)

Occupational Health and Safety and Personnel with responsibility in welding fabrication – L. Costa (Italy)

Neuroplastic changes within the brains of manganese exposed welders: recruiting additional neural resources for successful motor performance - M. Cosgrove (United Kingdom)

Health and safety risks in welding activities - W. Zschiesche (Germany), L. Costa (Italy)

Low-energy arc welding with gas shielding - the influence of material and technological conditions on pollutants emission to work environment – J. Matusiak (Poland)

Analysis of fumes generated with GMAW process – R. Nagalakshmi, S. Suresh, S. Dharmalingam (India)

Welding electrical hazards presentation to western mining electrical association october 1994 – D. Thesenvitz, D. Hisey (Canada)

Pneumococcal pneumonia in arc welders and others exposed to metal fume – M. Cosgrove (United Kingdom)

Role of OHS personnel in the welding industry – L. Costa (Italy)

Proposal from the European Union Scientific Commission on Occupational Exposure Limits for Nickel and its Compounds – D. Jordan (United Kingdom)
Welding duplex stainless steels. A review of current recommendations - L. Karlsson (Sweden)
Low energy input and high dilution welding of duplex stainless steels – L. Karlsson, H. Arcini (Sweden)
Experience in welding stainless steels for water heater applications – E.M. Westin Austria), D. Serrander (Sweden)
Modelization of δ-ferrite content in austenitic stainless steel weld metals – M. Asuncion Valiente Bermejo (Spain)
Influence of the alloy level [Cr_eq+Ni_eq] on the transition between [AF] and [FA] solidification modes in austenitic stainless steel weld metals - M. Asuncion Valiente Bermejo (Spain)
Key-hole plasma arc welding of 8 mm thick Maraging steel - a comparison with multi-pass GTAW – M.K. Mukherjee, R. Gupta, R. Reddy (India)
Mesoscale modeling of hydrogen diffusion in duplex stainless steel - T. Mente, Th. Boellinghaus (Germany)
Study of the influence of tungsten in superduplex stainless steel welds - S. Wessman et al (Sweden)
Improvement of weldability in Ni based alloy 52 filler metal - K. Kawasaki et al (Japan)
Cold cracking susceptibility of austenitic and martensitic weld metals – T. Kasuya et al (Japan)
Characteristics of inclusions in rutile-type FCAW weld metal – J.S. Seo et al (Republic of Korea)
Efficient estimation of volumetric heat source in fusion welding process simulation - S. Bag (France), D.V. Kiran, A. De (India)
Effect of welding and heat-treatment parameters on mechanical properties of quenched & tempered steel and weld metal – S. Das, R. Patel, M. Ghosh (India)
Electron beam welding of a TMCP steel with 700 MPa yield strength - W. Maurer et al (Austria), A. Pohl, T. Krüssel (Germany)
Proposal of thermal cycle tempering parameter and its use in hardness prediction in HAZ of temper bead welding – L. Yu et al (Japan)
Effect of prior austenite grain size of the base metal in improving type IV cracking resistance of boron containing modified 9Cr-1Mo steel weld joints - C.R. Das (India)
Hot cracking behaviour of 9% chromium steels – S. Manimozhi, S. Suresh, V. Muthupandi (India)
Phase evolution during the liquid-phase bonding of zirconium and austenitic stainless steel with zinc insertion – G. Reboul et al (Japan)
Influence of Ti and B additions on grain size and weldability of aluminium alloy 6082 – P. Schempp (Germany)
Microstructure investigation on a Ti-6Al-4V alloy friction stir welded with a new tool generation materials - M.V. Renteria, J.F. dos Santos (Germany)
Preliminary investigation on friction spot welding of AZ31 magnesium alloy - L.C. Campanelli et al (Brazil/Germany)
Influences of welding processes and post weld aging treatment on mechanical and metallurgical properties of AA2219 aluminium alloy joints - S. Malarvizhi, V. Balasubramanian (India)
Komisja X – Zagadnienia konstrukcyjne połączeń spawanych – zapobieganie pękaniu

**Komisja XI – Rurociągi i zbiorniki ciśnieniowe**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>XI-960-11</td>
<td>Development of seamless flux cored wire for high strength steel - Prospect of application for pressure vessel and high strength line pipe</td>
<td>R. Shimura et al (Japan)</td>
</tr>
<tr>
<td>XI-962-11</td>
<td>New lessons in Virtual Reality Arc Welding</td>
<td>Lincoln Electric (USA)</td>
</tr>
<tr>
<td>XI-963-11</td>
<td>Virtual Reality Integrated Weld Training – A scientific evaluation of training potential, cost effectiveness and implication for effective team learning</td>
<td>R.T Stone, K. Watts, P. Zhong (USA)</td>
</tr>
<tr>
<td>XI-968-11</td>
<td>Basic features of the metal magnetic memory method and the totals of development</td>
<td>A.A. Dubov, S.M. Kolokolnikov (Russia)</td>
</tr>
</tbody>
</table>
Komisja XII – Elektryczne spawanie łukowe w osłonie gazów i pod topnikiem

XII-2036-11 Influence of driving forces on weld pool dynamics in GTA and laser welding
– S-W. Han et al (Rep. Of Korea) 212-1192-11, IV-1060-11


XII-2041-11 Three-dimensional modelling of arc behaviour and gas shield quality in tandem gas–metal arc welding using anti-phase pulse synchronization – M. Schnick et al (Germany), A.B. Murphy (Australia) 212-1198-11, IV-1063-11


XII-2045-11 Laser-arc hybrid welding-recent advances in research and application – C.Thomy, F. Vollertsen, (Germany) 212-1203-11, IV-1058

XII-2046-11 Deep penetration welding with high power laser under low vacuum – S. Katayama et al (Japan) 212-1204-11, IV-1055-11
Overview of fatigue data for high frequency treated welded joints – H.C. Yildirim, G.B. Marquis (Finland)

A computational approach for fatigue life prediction in shot peened welded specimens – B.P. Athreya et al (USA)

Fatigue behaviour of GTAW, EBW, LBW and FSW joints of AISI 409M grade ferritic stainless steel - V. Balasubramanian, A.K. Lakshminarayanan (India)

Effect of welding processes and welding consumables on fatigue behaviour of armour grade steel joints - V. Balasubramanian, G. Magudeeswaran, G. Madhusudhan Reddy (India)

Failure analysis of aluminium oil cooler as per ASME code - G. Ravichandran, S. Suresh (India)

Corrosion fatigue of welded aluminium vehicle structures under constant and variable amplitude loadings - C. M. Sonsino et al (Germany)

An efficient meshing approach for the calculation of notch stresses - J. Baumgartner, T. Bruder (German)

Update of fracture mechanics chapters of the IIW fatigue design recommendations – A. Hobbacher (Germany) \textit{XV-1376-11}

Modifications since 1996 edition of the recommendations for fatigue design of welded joints and components – H.P. Lieurade, M. Huther (France)

Round robin calculations of fatigue assessment by fracture mechanics - A. Hobbacher (Germany)

The use of peak stresses for fatigue strength assessments of welded lap joints and cover plates with toe and root failures – G. Meneghetti, P. Lazzarin (Italy)

Effect of UIT on fatigue strength of web-gusset welded joints considering service condition of steel structures – T. Mori, H. Shimanuki, M. Tanaka (Japan)

Effect of preload and stress ratio on fatigue strength of welded joints improved by ultrasonic impact treatment – T. Okawa et al (Japan)

Improvement effect of fatigue strength by peening treatment under variable amplitude loadings – M. Tai, Ch. Miki (Japan)

Fatigue strength of thin-plated block joints with typical shipbuilding imperfections – L. Eggert, W. Fricke, H. Paetzold (Germany)

IIW guideline for the assessment of weld root fatigue – W. Fricke (Germany) \textit{XV-1338r1-11}
Fatigue reinforcement with a stirrup rib for the top of the vertical stiffener in orthotropic steel deck structures – K. Suzuki, Ch. Miki, K. Funato (Japan)

Cause identification of displacement induced fatigue using WSN – G.V. Minesawa et al (Japan)

Fatigue strength assessment of load carrying cruciform joints in low and high cycle fatigue region based on effective notch concept – K. Saiprasertkit, T. Hanji, Ch. Miki (Japan)

Fatigue crack initiation point of load carrying cruciform joints in low cycle fatigue region – T. Hanji, K. Saiprasertkit, Ch. Miki (Japan)

2011 report of work in progress on fatigue strength of welded joints in Japan – Ch. Miki, T. Mori, S. Nakamura (Japan)

Comparison of ISO 5817 quality criteria to that of National Standards - surface imperfections – R. Shaw (USA) XV-1384-11

Work in progress in France related to fatigue of welded components and structures – I. Huther, H.P. Lieurade (France)

Fatigue behaviour of welded joints treated by high frequency hammer peening: Part I: Experimental study - G. Le Quilliec et al (France)

Fatigue behaviour of welded joints treated by high frequency hammer peening: Part II: Numerical Study - G. Le Quilliec et al (France)
### XV-1376-11
Update of fracture mechanics chapters of the IIW fatigue design recommendations
– A. Hobbacher (Germany) *XIII-2370-11*

### XV-1378-11
Numerical modelling on laser welding of Ti-6Al-4V with phase transformation effects – M. Tsunori, D. Takakura (Japan)

### XV-1380-11
Modeling of laser-arc hybrid welding considered phase transformation – Y-Ch. Kim, M. Hirohata, K. Inose (Japan)

### XV-1381-11
Finite element based prediction and analysis of angular distortion in stainless steel T joint – R. Vetri Selvan, N. Raju, S. Suresh (India)

### XV-1382-11
Prediction of longitudinal distortion in tubular structures using statistical analysis - N. Raju, S. Suresh (India)

### XV-1383r1-11
IIW guideline for the assessment of weld root fatigue – W. Fricke (Germany) *XIII-2380r1-11*

### XV-1384-11
Comparison of ISO 5817 quality criteria to that of National Standards - surface imperfections – R.E. Shaw (USA) *XIII-2392-11*
<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>212-1187-11</td>
<td>Simulation of droplet detachment in GMA welding - U. Reisgen et al (Germany)</td>
<td></td>
</tr>
<tr>
<td>212-1189-11</td>
<td>Electric welding arc modeling with the three-dimensional solver OpenFOAM - A comparison of different electromagnetic models – I. Choquet, A.J. Shirvan, H. Nilsson (Sweden)</td>
<td></td>
</tr>
<tr>
<td>212-1190-11</td>
<td>Computational analysis of heat input property during TIG welding with torch tilt – N. Ochi et al (Japan)</td>
<td></td>
</tr>
<tr>
<td>212-1192-11</td>
<td>Influence of driving forces on weld pool dynamics in GTA and laser welding – S.-W. Han et al (Rep. of Korea)</td>
<td>XII-2036-11, IV-1060-11</td>
</tr>
<tr>
<td>212-1194-11</td>
<td>Analyses of dynamic behavior of metal vapor in gas metal arcs by monochromatic images using high-speed video-camera – M. Tanaka et al (Japan)</td>
<td></td>
</tr>
<tr>
<td>212-1195-11</td>
<td>Numerical analysis of gas metal arc with metal vapor for heat source in welding - Y. Tsujimura, M. Tanaka (Japan)</td>
<td></td>
</tr>
<tr>
<td>212-1196-11</td>
<td>Numerical analysis of gas shielding phenomenon in TIG welding – S. Kodama et al (Japan)</td>
<td></td>
</tr>
<tr>
<td>212-1197-11</td>
<td>Spectral diagnostics of a pulsed gas metal arc welding process – G. Gött et al (Germany)</td>
<td></td>
</tr>
<tr>
<td>212-1198-11</td>
<td>Three-dimensional modelling of arc behaviour and gas shield quality in tandem gas–metal arc welding using anti-phase pulse synchronization – M. Schnick et al (Germany), A. B. Murphy (Australia)</td>
<td>XII-2041-11, IV-1063-11</td>
</tr>
<tr>
<td>212-1199-11</td>
<td>Numerical simulation of a pulsed GMAW processes by using experimental data of the time-dependent geometry of wire and droplet – S. Rose et al (Germany)</td>
<td></td>
</tr>
<tr>
<td>212-1200-11</td>
<td>Development of numerical simulation model for FSW employing particle method – G. Yoshikawa et al (Japan)</td>
<td>III-1625-11</td>
</tr>
<tr>
<td>212-1202-11</td>
<td>Nano-processing and nano-joining using femtosecond laser pulses – T. Sano, A. Hirose (Japan)</td>
<td>XII-2044-11, IV-1054-11</td>
</tr>
<tr>
<td>212-1203-11</td>
<td>Laser-arc hybrid welding-recent advances in research and application – C. Thomy, F. Vollertsen (Germany)</td>
<td>XII-2045-11, IV-1058</td>
</tr>
<tr>
<td>212-1208-11</td>
<td>Three dimensional temperature measurement of TIG arc plasma – T. Konishi et al (Japan)</td>
<td></td>
</tr>
</tbody>
</table>